

## Alignment of Nulake Year 13 Calculus and Nulake Year 13 Statistics and Modeling Workbooks to Qatar Grade 12AQ Mathematics Quantitative Methods

### Overall features:

- Differentiated questions at 3 levels – Achievement/Merit/Excellence supports differentiated teaching.
- There are good notes and examples on use of graphic calculators –useful for teachers who have not had pd
- Advice on customizing the workbook for individual learning styles is included.
- Hints on how to study and how to use the book are included for teachers.
- The book is cheap – should be QR60 or thereabouts so it is feasible that every student have one as their basic workbook.
- The language is appropriate.
- The authors are open to writing specific sections to meet local conditions if numbers are guaranteed – e.g. a section on vectors could be included if requested.
- Highlighted notes and worked examples are well set out.
- Whereas many schools seem to send textbooks home for the students to use for homework (and they remain there unused for the year) and at the same time many students do not bring their workbooks to class, this combines the 2 books in one.

### Alignment of Nulake Year 13 Calculus Workbook and Year 13 Statistics and Modeling Workbook to Grade 12AQ Course

SoW Unit	Standards Covered	Nulake Work Book and Chapter	Standards Omitted	Comment
12AQ-01			12AQ-01	12AQ-01 is mostly covered in Nulake Year 12 Workbook Chapter 1.0 with the exception of division of polynomials and binomial expansions 12AQ 4.1 combinatorics is covered in Nulake Year 13 Statistics and Modeling Workbook Chapter 3.0
12AQ-02		Nulake Year 12 Workbook Chapter 5.0 and Year 13 Statistics and Modeling Workbook Chapter 5.0		See Year 12 workbook

12AQ-03	12AQ 5.1, 5.2, 5.8, 5.9, 6.1, 6.2, 6.3, 6.4	Year 13 Statistics and Modeling Workbook Chapter 7.0 Year 13 Calculus Workbook Chapters 3.0, 4.0 and 5.0	12AQ 5.3 12AQ 5.4 12AQ 5.5, 5.6, 12AS 5.9 parametric functions are covered in the context of Conics	12AQ 5.8 is covered only in the context of trigonometric functions
12AQ-04				This is mostly covered in Nulake Year 11 Workbook Chapter 5.0 and Nulake Year 12 Workbook Chapter 5.0
12AQ-05	All	Year 13 Statistics and Modeling Workbook Chapter 3.0		See Nulake Year 11 Workbook Chapter 6.0 for basic work
12AQ-06	All	Year 13 Statistics and Modeling Workbook Chapter 6.0		
12AQ-07		Year 13 Statistics and Modeling Workbook Chapter 6.0	Nulake Year 12 Mathematics Workbook Chapter 6.0 covers the Standard Normal Distribution	
12AQ-08	All	Year 13 Calculus Workbook Chapter 2.0		
12AQ-09		Year 13 Statistics and Modeling Workbook Chapter 2.0	12AQ 11.4, 11.5, 13.8	
12AQ-10		Year 13 Statistics and Modeling Workbook Chapter 5.0	12 AQ 15.1, 15.2,	

